

# Service Manual

## and Technical Guide

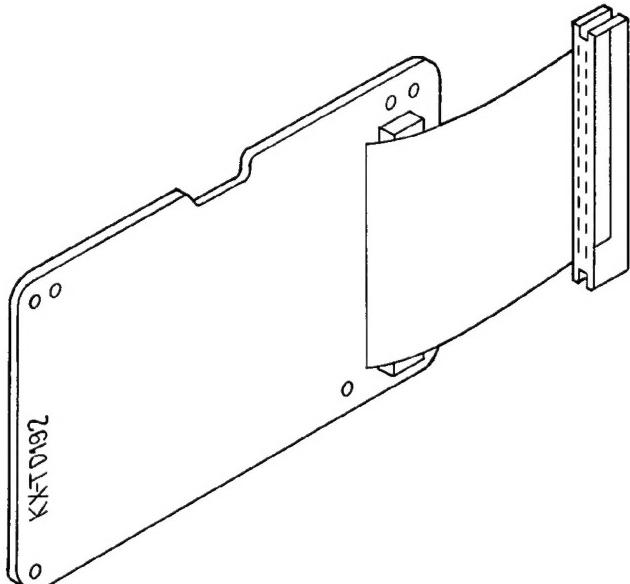
SYSTEM INTER CONNECTING CARD  
FOR KX-TD1232

**KX-TD192X**

(for Asia, Middle Near East and Other areas)

**KX-TD192C**

(for Canada)

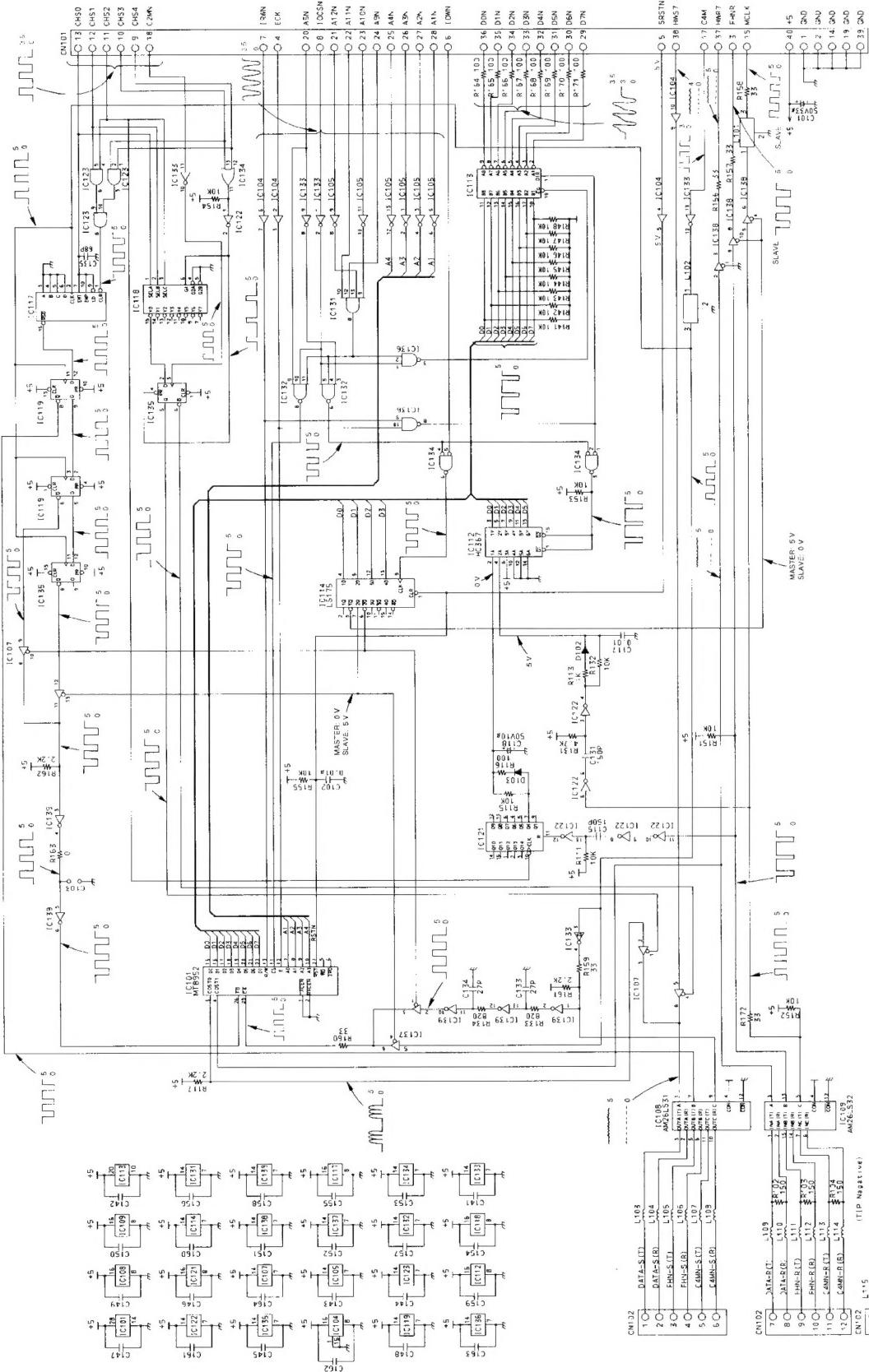


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**Panasonic**

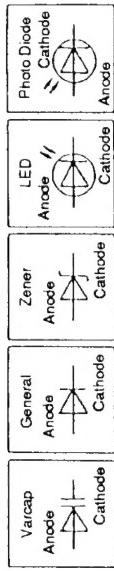
## SCHEMATIC DIAGRAM



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- Note:**

  - DC voltage measurements are taken with oscilloscope from ground line.  
(Waiting condition, Value is  $V_s$ )
  - The schematic diagram may be modified at any time with the development of new technology.



This replacement parts list is for KX-TD192C/X version only.

Refer to the simplified manual (cover) for other areas.

## REPLACEMENT PARTS LIST

### Model KX-TD192C/X

#### Notes:

- The marking (RTL) indicates that the Retention Time is limited for this item. After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time. The retention period of availability is dependent on the type of assembly, and in accordance with the laws governing part and product retention. After the end of this period, the assembly will no longer be available.
- The S mark indicates service standard parts and may differ from production parts.

#### 3. RESISTORS & CAPACITORS

Unless otherwise specified.

All resistors are in ohms ( $\Omega$ ) k=1000 $\Omega$ , M=1000k $\Omega$

All capacitors are in MICRO FARADS( $\mu F$ ) P= $\mu\mu F$

\*Type & Wattage of Resistor

Type

|            |                 |                |
|------------|-----------------|----------------|
| ERC:Solid  | ERX:Metal Film  | PQRD:Carbon    |
| ERD:Carbon | ERG:Metal Oxide | PQRQ:Fuse      |
| PQ4R:Chip  | ERO:Metal Film  | ERF:Wire Wound |

Wattage

|               |               |               |      |      |      |
|---------------|---------------|---------------|------|------|------|
| 10,16,18:1/8W | 14,25,S2:1/4W | 12,50,S1:1/2W | 1:1W | 2:2W | 5:5W |
|---------------|---------------|---------------|------|------|------|

\*Type & Voltage of Capacitor

Type

|                    |                                      |
|--------------------|--------------------------------------|
| ECFD:Semiconductor | ECCD,ECKD,PQCBC,PQVP : Ceramic       |
| ECQS:Styrol        | ECQM,ECQV,ECQE,ECQU,ECQB : Polyester |
| PQCBC,ECUV:Chip    | ECEA,ECSZ,ECOS : Electrolytic        |
| ECMS:Mica          | ECOP : Polypropylene                 |

Voltage

| ECQ Type | ECQG<br>ECQV Type | ECSZ Type | Others    |           |  |
|----------|-------------------|-----------|-----------|-----------|--|
| 1H: 50V  | 05: 50V           | OF:3.15V  | OJ :6.3V  | 1V :35V   |  |
| 2A:100V  | 1:100V            | 1A:10V    | 1A :10V   | 50,1H:50V |  |
| 2E:250V  | 2:200V            | 1V:35V    | 1C :16V   | 1J :63V   |  |
| 2H:500V  |                   | OJ:6.3V   | 1E,25/25V | 2A :100V  |  |

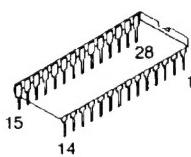
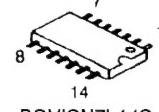
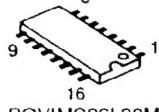
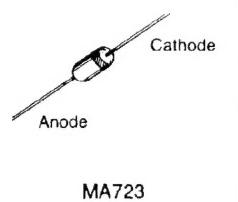
| Ref. No. | Part No.     | Part Name & Description | Pcs |
|----------|--------------|-------------------------|-----|
| IC101    | PQVIMT8952BE | (ICS)<br>IC             | 1   |
| IC102    | Not Used     |                         |     |
| IC103    | Not Used     |                         |     |
| IC104    | PQVISN7L365S | IC                      | 1   |
| IC105    | PQVISN7L14S  | IC                      | 1   |
| IC106    | Not Used     |                         |     |
| IC107    | PQVISN7L125S | IC                      |     |
| IC108    | PQVIMC26L31M | IC                      | 1   |
| IC109    | PQVIMC26L32M | IC                      | 1   |
| IC112    | PQVISN7H367S | IC                      |     |
| IC113    | PQVISN7L640M | IC                      | 1   |
| IC114    | PQVISN7L175M | IC                      | 1   |
| IC115    | Not Used     |                         |     |
| IC116    | Not Used     |                         |     |
| IC117    | PQVISN7L163S | IC                      | 1   |
| IC118    | PQVISN7L138M | IC                      | 1   |
| IC119    | PQVISN7L74S  | IC                      | 1   |
| IC121    | PQVISN7H402S | IC                      | 1   |
| IC122    | PQVIM7H04F   | IC                      |     |
| IC123    | PQVISN7L08S  | IC                      | 1   |
| IC131    | PQVISN7L21S  | IC                      | 1   |
| IC132    | PQVISN7L10S  | IC                      | 1   |
| IC133    | PQVISN7L14S  | IC                      | 1   |
| IC134    | PQVISN7L32S  | IC                      | 1   |
| IC135    | PQVISN7L74S  | IC                      | 1   |
| IC136    | PQVISN7L00S  | IC                      |     |
| IC137    | PQVISN7L125S | IC                      | 1   |
| IC138    | PQVISN7L125S | IC                      | 1   |
| IC139    | PQVIM7H04F   | IC                      | 1   |

| Ref. No. | Part No.     | Value, Part Name & Description | Pcs |
|----------|--------------|--------------------------------|-----|
| D102     | MA723        | (DIODES)                       | 1   |
| D103     | MA723        | DIODE(SI)                      | 1   |
| X301     | PQVCJ4915N8Z | (CRYSTAL OSCILLATORS)          | 1   |
| X302     | PQVCJ3579N9Z | CRYSTAL OSCILLATOR             | 1   |
| L101     | PQVFTU50MT   | (CERAMIC FILTERS & COILS)      | 1   |
| L102     | PQVFTU50MT   | CERAMIC FILTER                 | 1   |
| L103     | PQLQR1KT     | COIL                           | 1   |
| L104     | PQLQR1KT     | COIL                           | 1   |
| L105     | PQLQR1KT     | COIL                           | 1   |
| L106     | PQLQR1KT     | COIL                           | 1   |
| L107     | PQLQR1KT     | COIL                           | 1   |
| L108     | PQLQR1KT     | COIL                           | 1   |
| L109     | PQLQR1KT     | COIL                           | 1   |
| L110     | PQLQR1KT     | COIL                           | 1   |
| L111     | PQLQR1KT     | COIL                           | 1   |
| L112     | PQLQR1KT     | COIL                           | 1   |
| L113     | PQLQR1KT     | COIL                           | 1   |
| L114     | PQLQR1KT     | COIL                           | 1   |
| L115     | PQLQR1KT     | COIL                           | 1   |
| L116     | PQLQR1KT     | COIL                           | 1   |
| CN       | PQJS12R82Y   | (CONNECTORS)                   | 1   |
| CN101    | PQJS40R15Z   | CONNECTOR CABLE                | 1   |
| CN102    | PQJP14A37Z   | CONNECTOR, 40P                 | 1   |
| C101     | ECEA1EU330   | (CAPACITORS)                   | 1   |
| C102     | PQCUV1H103KB | 33                             | 1   |
| C103     | PQCUV1H390JC | 0.01                           | 1   |
| C104     | Not Used     | 39P                            | 1   |
| C115     | PQCUV1H151JC | Not Used                       | 1   |
| C116     | PQCUV1H103KB | 150P                           | 1   |
| C117     | PQCUV1H270JC | 0.01                           | 1   |
| C118     | ECEA1HU100   | 10                             | 1   |
| C131     | PQCUV1H151JC | Not Used                       | 1   |
| C132     | PQCUV1H270JC | 150P                           | 1   |
| C133     | PQCUV1H270JC | 27P                            | 1   |
| C134     | PQCUV1H680JC | 27P                            | 1   |
| C135     | PQCUV1H680JC | 68P                            | 1   |
| C141-164 | PQCUV1H223KB | 24                             | S   |
| R102     | PQ4R10XJ151  | (RESISTORS)                    | 1   |
| R103     | PQ4R10XJ151  | 150                            | 1   |
| R104     | PQ4R10XJ151  | 150                            | 1   |
| R111     | PQ4R10XJ103  | 10K                            | 1   |
| R112     | Not Used     | Not Used                       | 1   |
| R113     | PQ4R10XJ102  | 1K                             | 1   |
| R114     | PQ4R10XJ103  | Not Used                       | 1   |
| R115     | PQ4R10XJ103  | 10K                            | 1   |
| R116     | PQ4R10XJ101  | 100                            | 1   |

This replacement parts list is for KX-TD192C/X version only. Refer to the simplified manual (cover) for other areas.

| Ref. No. | Part No.    | Value, Part Name & Description | Pcs |
|----------|-------------|--------------------------------|-----|
| R117     | PQ4R10XJ222 | 2.2K                           | 1   |
| R131     | PQ4R10XJ472 | 4.7K                           | 1   |
| R132     | PQ4R10XJ103 | 10K                            | 1   |
| R133     | PQ4R10XJ821 | 820                            | 1   |
| R134     | PQ4R10XJ821 | 820                            | 1   |
| R141     | PQ4R10XJ103 | 10K                            | 1   |
| R142     | PQ4R10XJ103 | 10K                            | 1   |
| R143     | PQ4R10XJ103 | 10K                            | 1   |
| R144     | PQ4R10XJ103 | 10K                            | 1   |
| R145     | PQ4R10XJ103 | 10K                            | 1   |
| R146     | PQ4R10XJ103 | 10K                            | 1   |
| R147     | PQ4R10XJ103 | 10K                            | 1   |
| R148     | PQ4R10XJ103 | 10K                            | 1   |
| R151     | PQ4R10XJ103 | 10K                            | 1   |
| R152     | PQ4R10XJ103 | 10K                            | 1   |
| R153     | PQ4R10XJ103 | 10K                            | 1   |
| R154     | PQ4R10XJ103 | 10K                            | 1   |
| R155     | PQ4R10XJ103 | 10K                            | 1   |
| R156     | PQ4R10XJ330 | 33                             | 1   |
| R157     | PQ4R10XJ330 | 33                             | 1   |
| R158     | PQ4R10XJ330 | 33                             | 1   |
| R159     | PQ4R10XJ330 | 33                             | 1   |
| R160     | PQ4R10XJ330 | 33                             | 1   |
| R161     | PQ4R10XJ222 | 2.2K                           | 1   |
| R162     | PQ4R10XJ222 | 2.2K                           | 1   |
| R163     | PQ4R10XJ122 | 1.2K                           | 1   |
| R164     | PQ4R10XJ101 | 100                            | 1   |
| R165     | PQ4R10XJ101 | 100                            | 1   |
| R166     | PQ4R10XJ101 | 100                            | 1   |
| R167     | PQ4R10XJ101 | 100                            | 1   |
| R168     | PQ4R10XJ101 | 100                            | 1   |
| R169     | PQ4R10XJ101 | 100                            | 1   |
| R170     | PQ4R10XJ101 | 100                            | 1   |
| R171     | PQ4R10XJ101 | 100                            | 1   |

## TERMINAL GUIDE OF IC'S, TRANSISTORS AND DIODES

|   |  |   |  |  |
|---|--|---|--|--|
| <br>PQVIMT8952BE | <br>PQVISN7L14S<br>PQVISN7L125S<br>PQVISN7L74S<br>PQVIM7H04F<br>PQVISN7208S | <br>PQVISN7L00S<br>PQVISN7L21S<br>PQVISN7L10S<br>PQVISN7L32S | <br>PQVIMC26L32M<br>PQVISN7H367S<br>PQVIMC26L31M<br>PQVISN7L365S<br>PQVISN7L175M | PQVISN7H402S<br>PQVISN7L138M<br>PQVISN7L163S |
| <br>MA723        |  |   |  |  |